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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|--------------------------|------------------------|
| 10/517,886 | 12/13/2004 | Yoshihiro Yazawa | JFE-04-1330 | 1600 |
| 35811 7590 12/13/2007 IP GROUP OF DLA PIPER US LLP ONE LIBERTY PLACE 1650 MARKET ST, SUITE 4900 PHILADELPHIA, PA 19103 | | | EXAMINER YEE, DEBORAH | |
| | | | ART UNIT 1793 | PAPER NUMBER |
| | | | MAIL DATE 12/13/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/517,886

Applicant(s)

YAZAWA ET AL.

Examiner

Deborah Yee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 to 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 2000-336462 (hereinafter JP'462) or Japanese patent 09-137231 (hereinafter JP'231) for the reasons set forth in the previous office action dated April 13, 2007.

Response to Arguments

3. Applicant's arguments filed October 15, 2007 have been fully considered but they are not persuasive.
4. In regard to the 103 rejection over JP'462, it was argued that prior art specifies in the claims the presence of 0.01 to 0.35% Ti, 0.1 to 0.8% Nb, and 0.0005 to 0.010% Mg as indispensable contents whereas the Applicants' specification from page 20 at line 7 from the bottom to page 21 at line 3 states that Nb and Mg are not indispensable elements and are at a level of the amount of unavoidable impurities. Thus, JP'462 and amended claim 1 are dissimilar in terms of the composition. It is the Examiner's position that the additional elements, Nb and Mg, are not excluded from Applicant's claim, which recites, ""comprising" since such phrase opens claim up to unrecited elements.

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Moreover, the present invention may teach Mg and Nb at impurity levels but they are at ranges of less than 0.003% Mg and 0.5% or less Nb that overlap with prior art ranges of 0.0005 to 0.010% Mg and 0.1 to 0.8% Nb, respectively. Hence claimed composition would not patentably distinguish over JP'462.

5. Also even though prior art does not teach excellent workability at high temperature (a high r value, high elongation and low yield strength) which Applicants' claim 1 steel provides, such properties would be expected since composition and process of making are closely met and in absence of proof to the contrary.

6. In regard to the 103 rejection over JP'231, it was argued that prior art does not specify Mn and the only example contains 0.338% Mn. On the other hand, the Applicants' amended claim 1 specifies 0.3% or less Mn. It is the Examiner's position since Applicants have not established criticality of the Mn range (e.g. by comparative test data), then a composition with 0.3% Mn versus a composition with slightly more Mn (say 0.338%) would depict a mere difference in the proportion of element without any attendant unexpected results, which would not patentably distinguish claims over prior art. Moreover, the claims of JP'231 do not actively recite Mn as an alloying constituent. This would indicate Mn as an optional element that does not need to be present; and therefore would suggest Applicants' Mn range of 0 to 0.3%.

7. It was pointed out that JP'231 steel contains 10 to 12% Cr whereas present invention steel contains a higher Cr range of 15 to 30% to increase corrosion resistance. The conventional alloying element, Cr, for steel, however, is well known in the art to increase corrosion resistance. Therefore, to further increase Cr in the JP'231

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steel would be a matter of routine optimization and choice well within the skill of the artisan to produce no new and unexpected results.

8. Also even though excellent workability at high temperature (a high r value, high elongation and low yield strength) which Applicants' claim 1 steel provides are not taught by prior art, such properties would be expected since composition and process of making are closely met and in absence of proof to the contrary.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/
Primary Examiner
Art Unit 1793

/DY/